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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/803,097

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Richard L. Cunningham

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EXAMINER

MULLEN, THOMAS J

ART UNIT

PAPER NUMBER

2632

DATE MAILED: 03/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/803,097

Applicant(s)

CUNNINGHAM, RICHARD L.

Examiner

Thomas J. Mullen, Jr.

Art Unit

2632

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 7-15 is/are allowed.
- 6) ☒ Claim(s) 16-25 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/23/04 (6 pp.)</u> . | 6) <input type="checkbox"/> Other: ____. |

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1. The patent numbers associated with applications 09/237,969 and 09/811,358-- mentioned in paragraphs 1056 and 1063 of the specification, respectively--should be inserted in the appropriate place.

2. The disclosure is objected to because of the following informalities:

paragraph 1024, last line, it appears that "120" should be --130--;

paragraph 1026, line 4, it appears that "240" should be --230--;

paragraph 1036, next-to-last line, it appears that "it" should be --its--;

paragraph 1038, line 2, it appears that "620" should be --630--;

paragraph 1041, line 1, it appears that "711" should be --710--;

paragraph 1050, line 3, it appears that "Fig. 7" should be --Fig. 8--; and

paragraph 1073, line 2, it appears that after "computer" should be inserted --mouse--.

Appropriate correction is required.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "910" has been used to designate both a "vacuum source" and a "base structure" in Fig. 11 (see paragraphs 1051-1052 of the specification).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. Claim 6 is objected to under 37 CFR 1.75(a) for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 6, line 1, "the input" lacks clear antecedent basis; note "input signal", claim 1, line 2. In particular, claim 6, line 1 recites, "the input includes a signal"; it is unclear if the claim 6 "signal" is the same or different signal as the claim 1 "input signal".

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 23-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 23 recites, in part: "code to...receive a signal...and modify a pressure within a volume..." (lines 2-4). It is unclear how a "code" per se is literally capable of performing a physical function, such as "receiv(ing) a signal" or "modify(ing) a pressure".

Likewise, in claims 24-25 it is unclear how a "code" per se is literally capable of "modify(ing) the pressure to generate a pressure differential..." or "provid(ing) a drive signal...".

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 23-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 23-25 are seemingly a patentable process; however, they are seeking patent protection for the "code representing instructions", i.e. an abstract idea. In addition, there is no practical application recited in the claims other than the instructions. (Note that claims 23-25, after the preamble in each claim, merely recite "code" per se--e.g., "(code to) receive a signal", "(code to) modify a pressure within a volume...", etc.) One may not patent a process that comprises every "substantial practical application" of an abstract idea.

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8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Poggie (US 3872952).

Note in Poggie, "movable member" 17; "braking member" (10,32 or 14,42); the braking members each defining a "cavity" having a "volume", within which a "pressure" level is modifiable (note P_1 associated with the "volume" of braking member 10, and P_2 associated with the "volume" of braking member 14); the pressure levels (P_1, P_2) being modifiable based on a received "signal" from brake pedal 12, via brake cylinder 11 and servo valve 13, see col. 2, line 47 to col. 3, line 35.

Regarding claim 17, brake shoes 32 and 42 (associated with brakes 10 and 14, respectively) are caused to "frictionally engag(e)" a surface of "movable member" 17, in response to activation of brake pedal 12.

Regarding claims 18-19, brake cylinder 11 and servo valve 13 may inherently be characterized as a "vacuum source" (noting that, the conditions associated with a "vacuum" are simply inversely related to the conditions associated with an increase in pressure), the "vacuum source" 11,13 modifying the pressure within the volume in response to a "signal".

Regarding claim 20, it is inherent that the pressure levels (P_1, P_2) within the "volumes" associated with braking members 10,14 form a "differential" when compared to the "environment outside of the volume" (i.e., atmospheric pressure), such "differential" being necessary to overcome the resistive force of springs 15,16 associated with braking members 10,14 respectively.

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are

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such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poggie.

Poggie fails to disclose that the braking system (which is used in the context of a "vehicle", see the Abstract) may receive signals from, and/or be controlled by, a "processor" (e.g. computer, microprocessor, etc.), such that electronic "signals" are used to control the operation of the braking system. However, at the time of the invention it was well known in the art to control various aspects of motor vehicle operation electronically, in particular via a "processor"-based system, which greatly enhances the efficiency and/or functionality of the controlling aspects of the system. Therefore, at the time of the invention it would have been obvious to implement the braking system of Poggie as a "processor"-based system, having a "processor-readable medium" for causing the processor to "perform a process" having process steps associated with operating the braking system, where one skilled in the art would have recognized that "modulated" electronic signals would typically be used to effect the necessary communication between different physical components of the system for appropriate control thereof, such signals using any appropriate modulation frequency or range of frequencies.

12. Claims 1-15 are allowed, and/or would be allowable if rewritten or amended to overcome the objection(s) under 37 CFR 1.75(a), set forth in this Office action.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The art cited by applicant has been considered. Schena (US 2002/54060), Ganelin (US 6129507) and Pembroke (US 3612377) are cited to further show the state of the art.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas J. Mullen, Jr. whose telephone number is 571-272-2965. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4 PM. The examiner can also be reached on alternate Fridays.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Wu, can be reached on (571) 272-2964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJM

A handwritten signature in black ink, reading "Thomas J. Mullen, Jr.", with a stylized, cursive script.

Thomas J. Mullen, Jr.
Primary Examiner
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